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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,841	02/11/2002	Keiji Emoto	00862.022517	8954
5514	7590	12/10/2003	EXAMINER	
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			MOHANDESI, IRAJ A	
			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/068,841	EMOTO, KEIJI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Iraj A Mohandesi	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 September 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 10-20 and 22-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-17-19,20,22-27,29,30,32 and 33 is/are rejected.
- 7) ☒ Claim(s) 28,31 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All   b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                     | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### *Claim Objections*

1. Claims 33 and 34 are objected to because of the following informalities:

With regards to office action respond, mailed on 09/02/2003 there is a typographic error in page 8 line 3 of remark.

Applicant's newly added claims should be changed from 22-32 to 22-34.

Appropriate correction is required.

### *Response to Arguments*

2. Applicant's arguments with respect to **claims 22 and 32** have been considered but are moot in view of the new ground(s) of rejection.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 10,15,17-19,20,22,25-27,32 and 33** are rejected under 35 U.S.C. 102(b) as being anticipated by **Lee US patent 6130,490**.

**Lee'490** discloses a linear motor comprising a coil (48a, 48b, column 6,line 41, Fig.1) a magnet (24, column 5,line 33, Fig.1) one of said coil and said magnet moving relative to the other of said coil and said magnet by flowing a current to said coil (see Fig.1) and a

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metal film (column 8,line 33) arranged in at least a portion between said coil and said magnet, and has been mirror polished (column 6,line 14-16), a movable stage interlay formed with said movable element of the linear motor (see abstract , an electron bean " a stage assembly for movement in the x a y direction), a magnet support member (column 12 line 54 ), a vacuum mechanism (column 4 line 55-58).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 23,29,30** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee US patent 6130,490** in view of **Li, 6417,917**.

**Lee'490** discloses a linear motor comprising a coil (48a, 48b, column 6,line 41, Fig.1) a magnet (24, column 5,line 33, Fig.1) one of said coil and said magnet moving relative to the other of said coil and said magnet by flowing a current to said coil (see Fig.1) and a metal film (column 8,line 33) arranged in at least a portion between said coil and said magnet, and has been mirror polished (column 6,line 14-16), a movable stage interlay formed with said movable element of the linear motor (see abstract , an electron bean " a stage assembly for movement in the x a y direction), a magnet support member (column 12 line 54 ).

However **Lee'490** teaches all limitation of the claim invention except a cooling system in vacuum environment and the metal film "coating" witch is provided by different metals.

**Li,914** discloses a stage device and exposure apparatus having coil covered with flat plate shaped member (68, column 14, line 18, Fig4) for supplying a refrigerant that cools the coil and metal film is formed on a surface of at least said stator, a chamber surrounding said stage (22,23,42 see Fig.1) and a vacuum mechanism (column 28, line 3) for the purpose of reducing the generated heat in the stator coil,

Therefore it would have been obvious to one having skill in the art at the time the invention was made to combine **Lee'490** linear motor with a cooling system and vacuum mechanism as taught by **Li, 914** for the purpose of reducing the generated heat in the stator coil.

7. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over combination **Lee'490 Li,914** as applied to **claims 10,15,17,19,20,22,23,25,27, and 30** above, and further in view of **Karidis US patent 5,153,472**.

However the combination **Lee'490 Li,914** fails to teach a linear motor, wherein a metal film is grounded .

**Karidis'472** discloses a linear motor, wherein a metal film ( the housing 80 is grounded column 10, line 22) for the purpose of minimizing effect of capacitance and noise pick up.

Therefore it would have been obvious to one having skill in the art at the time the invention was made to modify the combination of **Lee'490/ Li,914** linear motor with a metal film is grounded as taught by for the purpose of minimizing effect of capacitance and noise pick up.

With respect to **claims 11-14 and 24**.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to use different material for plating such as nickel or gold as a nonmagnetic material with a thickness of 10 micro m to 30 micro m for the purpose of higher emissive ( for heat radiation ) ,since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the indented use as a matter of obvious design choice in re Leeshin 125 USPQ 416. and also it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art .In re Boesh, 617 F.2d 272,205 USPQ 215 (CCPA).

#### ***Allowable Subject Matter***

8. **Claims 28,31and 34** objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Communication***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Iraj A Mohandesi whose telephone number is (703)305-3242. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 703-308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9314 for regular communications and (703)872-9314 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)306-0377.

IM  
November 25, 2003

  
BURTON S. MULLINS  
PRIMARY EXAMINER